

**6th Grade  
Scope & Sequence  
HAFO Project**

**State Standards to be Addressed: Standard 4:** Earth and Space Systems

**Goal 4.1:** Understand Scientific Theories of Origin and Subsequent Changes in the Universe and Earth Systems

**6.S.4.1.2:** Explain the water cycle and its relationship to weather and its relationship to weather and climate.

**6.S.4.1.3:** Identify cumulus, cirrus, and stratus clouds and how they relate to weather changes.

**Instructional Goals: Students Will:**

- 1 recognize the relationship between the Water Cycle and Weather
- 2 understand that water on the Earth moves in a continuous cycle
- 3 be able to name and explain the stages of the water cycle
- 4 understand what climate is and all that it incurs
- 5 be able to understand the difference between climate and weather
- 6 understand the difference between the basic types of clouds and what and how they relate to weather: cirrus, cumulus, stratus.

**Focus Questions:**

- 1 What does water have to do with the weather?
- 2 In what way does water affect organisms life on this planet?

**Method(s) of Assessment:**

- 1 Observation of students as they conduct experiments.
- 2 Quiz or Test to check for understanding at the end of Climate Unit.

**Time Needed:**

These activities will generally take 35 - 45 minutes each day for 3 weeks.

**Career Connections:**

- 1 [Hydraulic Engineer](#)
- 2 [Plumber](#)
- 3 [Meteorologist - Weather Person](#)
- 4 [US Coast Guard Officer](#)
- 5 [Water Resource Technician](#)
- 6 [Water Treatment Plant Officer](#)

## Lesson 1: Ecosystems

Time	Presentation
	<b>Follow designed presentation if you wish</b>  Ecosystem activity <a href="http://www.fi.edu/tfi/units/life/habitat/habitat.html">http://www.fi.edu/tfi/units/life/habitat/habitat.html</a> <a href="http://www.bellmuseum.org/distancelearning/prairie/build/index.html">http://www.bellmuseum.org/distancelearning/prairie/build/index.html</a>

## Lesson 2: The Water Cycle

Time	Presentation
10 min Day 1	Teach the "Water Cycle Song"
Day 1	Introduction to Water Cycle Vocabulary <b>Follow the developed ppt. presentation if desired at this point</b> <a href="#">Evaporation</a>  <b>Teacher Demonstration:</b> <u>Fog in a bottle</u> <a href="http://imnh.isu.edu/digitalatlas/teach/grade.htm">http://imnh.isu.edu/digitalatlas/teach/grade.htm</a>
Day 2	<a href="#">Condensation</a>  <b>Teacher Demonstration:</b> <u>Creating Condensation</u> <a href="http://imnh.isu.edu/digitalatlas/teach/grade.htm">http://imnh.isu.edu/digitalatlas/teach/grade.htm</a>  <a href="#">Precipitation</a> <a href="#">Accumulation or (Collection)</a> <a href="#">Ground Water</a> <a href="#">Saturation</a> <a href="#">Infiltration</a> <a href="#">Transpiration</a> <a href="#">Water Cycle</a>

\* Presentations will take 25 to 35 minutes each day.

## Lesson 3: Activity: Mini Water Cycle

Time	Activity
60 min	Follow the instructions on the website listed below: <a href="http://www.units.muohio.edu/dragonfly/water/experiment.shtml">http://www.units.muohio.edu/dragonfly/water/experiment.shtml</a>
5 min	Checking for understanding  <a href="http://www.e4s.org.uk/director/wtrgoes.htm">http://www.e4s.org.uk/director/wtrgoes.htm</a>

#### Lesson 4: Clouds

Time	Presentation
25 min	Introduction to Climate Vocabulary <a href="#">Cirrus</a> <a href="#">Cumulus</a> <a href="#">Stratus</a> <a href="#">How Clouds Form</a>
Time	Activity: Cloud Case & Cloud in a Bottle
30 min	Directions: Go to the following website, and follow the directions <a href="http://weathereye.kgan.com/cadet/cloudless/teachers.html">http://weathereye.kgan.com/cadet/cloudless/teachers.html</a> <a href="http://www.weatherwizkids.com/cloud1.htm">http://www.weatherwizkids.com/cloud1.htm</a>

#### Lesson 5: Activity: Design a Cloud Key

Time	Activity
45 min	Directions: Go to the following website below, and scroll down to Design a Cloud Key and follow directions. <a href="http://www.wildwildweather.com/clouds.htm">http://www.wildwildweather.com/clouds.htm</a>

#### Lesson 6: Climate and Weather

Time	Presentation
35 min	Introduction to Climate Vocabulary <a href="#">Climate</a> <a href="#">Temperature</a> <a href="#">Precipitation</a> <a href="#">Wind</a> <a href="#">Weather</a>

#### Lesson 7: Pale ecosystems

Time	Presentation
	Bring in a National Park Service Presenter: <a href="http://imnh.isu.edu/digitalatlas/teach/subfrm.htm">http://imnh.isu.edu/digitalatlas/teach/subfrm.htm</a> Click on Hagerman Diorama
	<a href="#">Digital atlas of Idaho : Hagerman Diorama</a> <a href="#">Designed Software for Climate Change</a>

